

MODIS Technical Team Meeting
Thursday, January 9th, 2003
Building 33, Room E125

Vince Salomonson chaired the meeting. In attendance were Bob Barnes, Barbara Conboy, Gary Alcott, Skip Reber, Shaida Johnston, Robert Wolfe, Chris Justice, Eric Vermote, Bruce Guenther, Michael King, and Jack Xiong, with Yolanda Harvey taking the minutes.

1.0 Upcoming Events

- Semi-annual Reports Due January 15, 2003, covering period July-December 2002.
- MODIS Oceans Workshop, February 3-4, 2003, New Hampshire, USA
- Ocean Color Meeting, April 15-17, 2003, Miami, Florida, USA.
- IGARSS 2003, July 21-25, 2003, Toulouse, France (abstracts due by January 17, 2003). <http://www.igarss03.com/>
- 10th International Symposium on Remote Sensing by The International Society for Optical Engineering (SPIE). September 8-12, 2003, Barcelona, Spain (abstracts due by February 10, 2003). <http://www.spie.org/info/rs>

2.0 Meeting Minutes

2.1 General Discussion

NOTE: The MODIS/MODARCH site experienced a security event on December 19th, 2002, and has been off-line since. Getting the MODIS/MODARCH site back on line is being worked on hard and progress is being made. Latest information indicates that it will be no earlier than late in the week of January 20 or early the week of January 27. The Goddard reviews of the reconstructed site are now pacing items.

Salomonson noted that Harvey has been working on updating the MODIS site's lists of refereed publications. The purpose of this list is to serve as one "index" to show NASA HQ at the data products review how productive the MODIS team has been over its existence to date. The review is scheduled for March 10 and 11. Salomonson also indicated that he is interested in determining the number of Masters and Doctoral degrees that have been produced under MODIS funding. He, via Barbara Conboy, will be requesting this input soon from the Science Team members. Salomonson noted that he is projecting some kind of Science Team Meeting (perhaps just a 2-3 hour telecon) should occur between the release of the NRA and the HQ review. This would put the date sometime in February 2003 and most likely the second week of February. [Late note: The NRA is notice is now on the Code Y Research Announcements web page -- See http://research.hq.nasa.gov/code_y/open.cfm -- and is to be released January 30, 2003.]

Salomonson noted that he learned today (January 9) in a meeting with TRW people that they are working on developing the data system for producing VIIRS products for NPP NPOESS; and they would like information on how MODIS products are produced and validated. He suggested to them (TRW) that they start by visiting with the MCST folks about Level 1 efforts, the University of Miami about their processes for SST and Ocean Color, University of Maryland for surface reflectance and related QA efforts, and the University of Wisconsin-Madison for Cloud Top Temperature, cloud mask efforts. After

those visits it could be seen what else is desired by TRW. Salomonson said he would contact those noted above to see if they would be willing to meet with the TRW people. Justice indicated that he/the University of Maryland would be interested in a preliminary discussion.

Salomonson noted that as of January 13, 2003, Jack Xiong, formerly of SSAI, will be a GSFC civil servant in the GSFC Laboratory for Terrestrial Physics. Also, the MCST offices will be moving to the Aerospace Building in Lanham, MD, in late January or early February.

Bob Barnes announced that SeaWiFS was able to get a contract in place 6 minutes before their downlink was cut off, so they are operational for another year.

King noted that Steve Platnick has been hired as a civil servant for the Mesoscale Atmospheric Processes Branch in the Laboratory for Atmospheres at Goddard.

2.2 Instrument Status

Xiong reported that both instruments are working well with no anomalies except on a noise detector on Terra MODIS band 28. He said that this will probably continue to happen over time. He said that as of the new year, they submitted a set of LUTs for the Ocean products in Terra forward processing. They also finished set of yaw maneuvers before the new year, and postponed the second set to Jan 15-16, 2003. Otherwise, everything looks fine.

2.3 DAAC

Alcott reported that there was a major impact on forward processing (sea ice was delayed), but they have recovered. Reprocessing is averaging at 3.5x, and they are starting to push November/December data at 2x.

Alcott identified three main issues. The first is a corrupted archive file (bits and pieces of data combined into a granule and stored in the archive) that is probably due to intermittent hardware failure. Any data based on subscriptions is not affected, and though a number of Terra and Aqua data days are affected, the granules only surface when data is pulled out physically. They are working on determining the exact cause, are checking for media failures, and are spot-checking all their tapes at least once. Johnston wondered whether the DAAC wasn't already checking for media failures, and Alcott said that they weren't because of the sheer amount of reprocessing they do. He said that they are going to concentrate on L 0 data and archiving for other missions.

The second issue is that when they transferred Collection 1 into 199, it was just a database change. The data files still identify as Collection 1, even though they are in 199, so they now have to physically change the files. They are currently updating the process so that they physically copy the files to another location so that they are recognized as Collection 199. As for retiring Collection 1, they are progressing. Oceans Collection 1 has all migrated, so that part is done, but Atmospheres has some holes to be closed (by end of May 2003), as does L1 data (by end of January 2003).

The third issue is that they are working on making the Aqua July Atmospheres data visible by the next EDG cycle (January 15th, 2003). Johnston wondered whether the data

could be released with a caveat about the validation status, and King replied that it would be okay to release the July data and list it as 'beta' rather than 'provisional,' which is what the August 2002-present data would be.

Reber reported that he is getting some feedback about the Goddard DAAC User Services where users find it unresponsive as compared to the EDC User Services, for example. He wanted to bring this to Kempler's attention. Alcott noted that he has heard opposing opinions as well.

2.4 MODAPS

Wolfe reported that MODAPS is doing really well in forward processing over the last three weeks, they are currently only one day behind, and performing at 2.6x over the last week. For the last 30 days on Terra, forward processing was completely clean, which was the first completely clean month closed out. For Aqua, they've had 45 days at 100%. King noted a problem with the Dec .30th, 2002 data-day, and Wolfe said that he will check on it. Wolfe continued that they had to roll back the database twice because of hardware problems that cost them a couple of days of processing, but they were able to catch back up. For Collection 4 reprocessing, they have been at 4x since December 20th, 2002, and the system is holding up. They got a lot of work done over the holidays, for which he thanked the MODAPS team for their effort. He reported that the EDC DAAC is able to ingest and archive the data at 4x without any problems.

Wolfe reported that for Land forward processing, they will begin running the V4 algorithms for Aqua on Feb. 2, 2003 data-day, after the remaining ESDT checkouts at the DAAC are completed.

Wolfe reported that the Geolocation accuracy on Aqua is getting worse. He met with Paul Ondrus to discuss the problem. When geolocation group did the first bias correction, they initially got a 150-m RMS error. This is significantly larger than on Terra because they are seeing a much larger attitude variation within the orbit. They have been working with attitude group to understand the problem and are beginning discussions with the spacecraft and instrument people to determine if it is a thermal problem. They are currently seeing a 200-m RMS error that is caused by a much larger time-dependent pitch error (5 times larger than on Terra). Wolfe said that they expect the error to start coming back down in January, but they don't yet have enough data to create a time-varying LUT. Guenther noted that on other missions TRW/Northrop controls the spacecraft orientation differently than Lockheed does. Wolfe doubted that this is the effect they are seeing but said that he would look into it.

2.5 Land Discipline

Justice reported that they are working on getting the Land site's pages of products and descriptions up to date and consistent. Reprocessing is looking good, and forward processing is good so far. They are flagging the status of products prior to November, and he wondered whether they should be called validated or provisional. He wants it to be consistent.

2.6 Oceans Discipline

Esaías reported that things are going well; they have declared the Aqua MODIS SST and 4-micron products as validated. MODIS SST comparisons against AIRS and AMSR are

looking good; AIRS may see some high cirrus that MODIS misses, but overall the three give excellent agreement. The differences are due to aerosol concentrations. MODIS SST is approaching the 0.1-degree Kelvin standard of accuracy.

Esaias reported that Oceans software is available on Pat Coronado's website. He noted that the L1 data version is compatible with the Oceans software version that is available, but both need to be updated to Collection 4. He set up meeting with Coronado, Teague, and Isaacman for January 15th, 2003 to discuss.

Reber said that in the responses Monica Todirita got from Oceans, some of the nomenclature for resolutions is inconsistent on several websites (Reber's, the GDAAC, and Oceans). Esaias said that in Oceans, the 39-km maps are referred to as 36-km maps. The metadata correctly report them as 39-kmmaps, and the Oceans people are working on tracking down wherever they say 36-km and updating it to 39-km, though this will take time.

2.7 Atmospheres Discipline

King reported that he continues to work on the EOS Data Products Handbook, and it has come to his attention that many of the listed references are not recent. HQ/Jack Kaye looked over the draft over the holidays and highlighted some of the inconsistencies. King would like people to make sure that their citations and references are recent, and also to double-check their images. King also indicated that tables of data availability, instrument characteristics, web links, and points of contact would be useful to include in the handbook. King noted that Sterling Spangler is doing the page layout, and Jim Closs is doing the writing. Salomonson urged everyone to cooperate with this effort. King asked that everyone look at their sections and submit updates to Closs.

3.0 Action Items

3.1 New Action Items

3.1.1 Tech Team to further discuss TRW using MODIS data for validation of the NPP/NPOESS production process.

3.2 Old Action Items

3.2.1 King and Kempler to work together on getting ESDTs for the new Atmospheres L2 data product.

Status: Open.

3.2.2 Kempler to coordinate with Oceans group on creating documentation for the DAAC on the new Oceans L1A data subsets.

Status: Open.

3.2.3 Wolfe to contact Herring about the shopping cart feature for the Earth Observatory website.

Status: Open.

3.2.4 Teague to send Kempler and Alcott an email about the DAAC stopping L1 reprocessing for a couple of weeks to wait for the Land reprocessing to begin.

Status: Closed.

Teague sent the email and as of Friday, December 20th, 2002, the DAAC should be shipping data again. During the period in question, production continued at the DAAC but export to MODAPS was turned off.